

Syllabus for Test I

MS 105: Mathematics II

Rank of a matrix, determinants, Cramer's Rule. Linear systems of equations, Direct methods: Gauss elimination, Gauss-Jordan elimination and LU factorization. Vector spaces – Linear dependence of vectors, basis, linear transformations, range and kernel of a linear map.

MS 103: Mathematics II

Linear Algebra: Vector spaces, Linear dependence of vectors, basis, linear transformations, rank and inverse of a matrix, solution of algebraic equations consistency conditions. Hermitian and skew Hermitian matrices.